OPPORTUNITIES FOR

DOMESTIC SOLAR & BATTERY STORAGE

Richard Partington

Managing Director, AceOn Energy Ltd

INTRODUCING ACEON

AceOn are UK Renewable Energy and Battery Specialists and have a unique combination of a wealth of experience across the public and private sectors and draw on an in-depth knowledge of the battery storage and renewable energy sectors. AceOn has been chosen as the national Approved Partner/Supplier of both the Association of Public Service Excellence and the National Housing Federation for energy storage. AceOn also have strong relationships with the lead organisations in the Renewable Energy sector.

Association for Public Service Excellence -
Exclusive Approved Energy Storage Partner to **131 member councils**

National Housing Federation -
Exclusive Energy Storage Sector Supplier to **800 member Housing Associations**

UK Microgeneration Certification Scheme (MCS) -
AceOn helped develop the new MCS Battery Installation Standard. **Alex Thompson led on this for AceOn**. We have been selected by MCS to be their Battery Storage Partners at many exhibitions and events.

Alex & Mark Thompson, Richard Partington

Solar Energy UK (formerly Solar Trade Association) -
AceOn is one of the sponsors and contributors to their November 2021 'Solar Guide for Local Authorities publication. **Richard Partington is Vice-Chair of their Local Authorities Working Group.**

Mark Thompson has been appointed as a Member of the UK Government's **Faraday Battery Challenge Advisory Group**

THE TIME FOR SOLAR ENERGY GENERATION AND STORAGE IS NOW!

We face a **Climate Emergency** – the need to decarbonise our homes, businesses, offices and transport is understood.

UK Government's **Net Zero Carbon Target by 2050.**

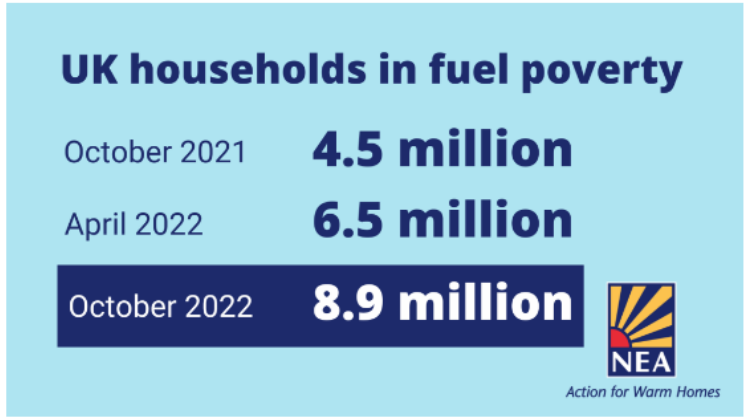
New Legislation and regulation for new-builds and Social Housing to improve their energy efficiency and increase Renewables – 'Part L'

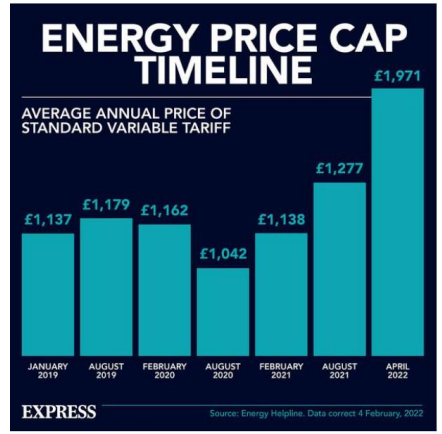
Reducing and **eradicating Gas** as a way to heat homes.

Fuel poverty has been a national concern for many years and…

This is now exacerbated by a **COST OF LIVING CRISIS** with **SOARING ENERGY BILLS FOR HOMES & BUSINESSES…**

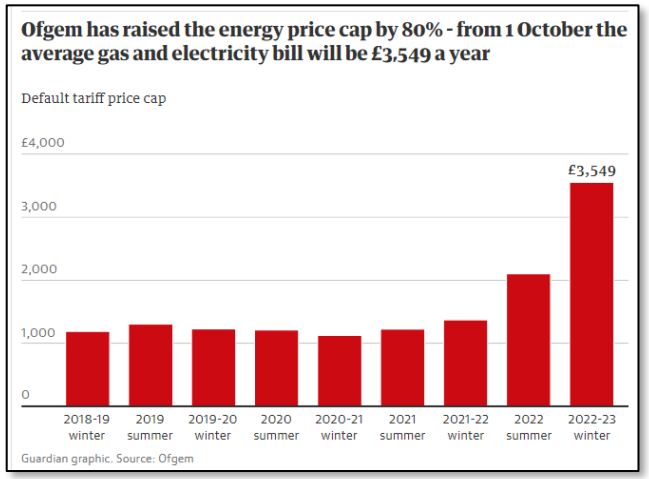
CLIMATE EMERGENCY UK

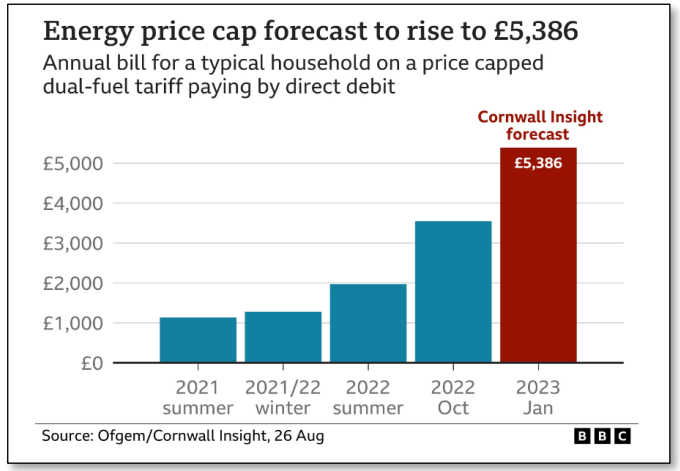




ANOTHER INCREASE IN ELECTRICITY COSTS FROM OCTOBER 2022…

- April 2022 Electricity Tariff Cap – 28.3p/kWh, Standing Charge 45.3p/day for direct debit payment (2% higher for Pre-Payment)
- 1 October 2022 – OFGEM set new with an increase overall of up to 80%. From October 2022 the Electricity Price Cap will be:
  - 51.8p/kWh
  - 46.3p/day
- OFGEM to review its Energy Price cap 4 times per year from 2023 – January, April, July, October = likely more volatility/uncertainty in the medium-term.
- **STOP PRESS** - Government announce their 2-year Energy 'Price Guarantee Rate' to reduce the extent of OFGEM's proposed increases. From October 2022, rates will be:
  - 34.0p/kWh
  - 46.4p/day
- Plus <u>one-off</u> £400 payment from Government to reduce every household's energy bill this Winter.





THE FUTURE OF ELECTRICITY COSTS….TIME TO TAKE GREATER CONTROL!

- Government OCTOBER 2022 Energy 'Price Guarantee Rate' – **STILL AN INCREASE IN ENERGY PRICES OF c.27% FROM SUMMER 2022 ENERGY PRICE CAP AND 96% HIGHER THAN WINTER 21/22 CAP.**
- Government Energy Price Cap 'protection' **cut from 2 years (September) to 6 months (October).**
- Government Statement NOVEMBER 2022 Energy - 'Price Guarantee Rate' to continue until April 2024 **BUT rate will be increased by 20%, taking the typical bill to £3,000** (currently £2,500).
- NB. In reality, **all households will actually see an even bigger rise to bills of 43% in April 2023** as the £400 payment all homes are getting this winter under the energy bill support scheme will not be extended.

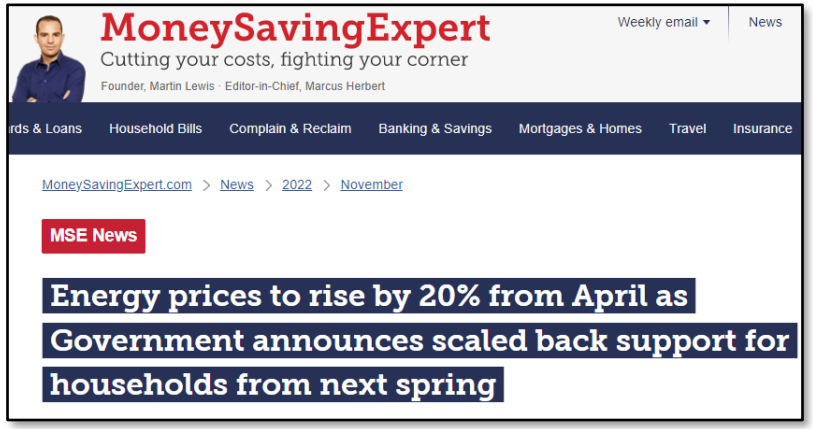
House of Commons Library

Energy Price Guarantee cut from two years to six months

The Energy Price Guarantee, announced by the Prime Minister on 8 September 2022, was initially due to last for two years from October 2022 to September 2024. However, the Chancellor announced on 17 October 2022 that it would now only last sixth months ending at the end of March 2023. The Chancellor's statement said:

> "...the Prime Minister and the Chancellor have agreed that it would be irresponsible for the government to continue exposing the public finances to unlimited volatility in international gas prices."

There will be a Treasury-led review of how to support households and businesses after April 2023. The objective of the review will be to "..design a new approach that will cost the taxpayer significantly less than planned whilst ensuring enough support for those in need." Any support for business will be targeted to those most affected and the new approach will "better incentivise energy efficiency".



The energy price guarantee will continue after April, but at a higher rate

The energy price guarantee caps the amount suppliers can charge for each unit of electricity and gas you use, as well as the standing charges – see what they are now in our EPG rates guide. It will remain at the current level of £2,500 a year for a typical household until 31 March 2023, before rising to £3,000 a year from 1 April. It'll last

CORNWALL INSIGHT
CREATING CLARITY

Energy prices to remain significantly above average up to 2030 and beyond

Research from Cornwall Insight looking at Great Britain's (GB) Power Market out to 2030 has shown energy prices will remain in excess of £100/MWh annually. This is significantly above the five year pre-2021 historic average of £50/MWh in Winter and the even lower prices in pre-2021 Summer.

Cornwall Insight's Benchmark Power Curve (BPC) for the British Electricity Market which covers England, Scotland, and Wales, shows that while prices will drop from the current levels, they will remain high. Prices are expected to rise to £150/MWh in Winter 2025 due to closures of nuclear power stations, delays to Hinkley C, and increasing high-cost peaking capacity.

ACEON'S SOLAR GENERATION AND STORAGE OFFERING TICKS SO MANY BOXES

- ✓ With solar PV alone, on average 28- 30% of solar energy can be consumed within a home directly; adding energy storage enables far more solar energy to be retained and used in the home, on average 60-70% + - significantly reducing the amount of electricity that needs to be purchased from the Grid.
- ✓ Increase the amount of Renewable Green Energy that the UK produces, reducing the need for carbon-based electricity in the National Grid Network.
- ✓ Reduces the Carbon footprint of a home, office or business.
- ✓ For Councils and Social Housing Providers it helps to achieve their Climate Change and Carbon Reduction Ambitions and Targets and demonstrably shows that they are leading from the front.
- ✓ It can help to TACKLE FUEL POVERTY and EASE THE COST OF LIVING PRESSURES by:
  - ❖ Reducing the cost of a household's electricity bill on an on-going basis;
  - ❖ Insulates the household to a large extent from future energy price increases;
  - ❖ Means a social housing tenant can find it more affordable to pay the rent and a household has more money in their pocket to potentially spend in the local economy.
- ✓ And AceOn and Rebel Energy have an optional ground-breaking and attractive 'wrap-around' Energy package offering that can help to maximise cost savings and income for a home and deliver income for a Social Housing Provider…

Introducing the AceOn2.6

- 'INSTALLER-FRIENDLY' – PLUG & PLAY, LIGHTWEIGHT, EASY TO HANDLE
- USING LiFePO4 TECHNOLOGY – WIDELY REGARDED AS THE SAFEST TYPE OF LITHIUM BATTERIES
- ADAPTABLE – BATTERIES CAN BE PARALLED TOGETHER TO INCREASE & ENABLE A RANGE OF STORAGE CAPACITY
- VALUE FOR MONEY – VERY COMPETITIVE PRICING
- A MARKET-LEADING WARRANTY – 10 YEARS OR 6,000 CYCLES GUARANTEED
- FLEXIBLE – FLOOR OR WALL MOUNTED
- IP65* RATING ENABLING INDOOR & OUTDOOR SITING OPTIONS
- IDEAL FOR BOTH RETROFIT AND NEW-BUILD INSTALLATIONS
- SUPPORTED BY ACEON'S UK SERVICE CENTRE

(Photograph shows 2 x Aceon2.6 batteries stacked in parallel providing 5.2kWh storage)

AceOn2.6 Battery Technical Data

CAPACITY	2.61kWh/51Ah
VOLTAGE	51.2V
CURRENT	50A Charge / Discharge
TECHNOLOGY	LiFePO4
IP GRADE	IP65*
DEPTH OF DISCHARGE	90%
WARRANTY	10 years / 6,000 Cycles
OPERATING TEMPERATURE	Charging 0 – 45˚C / Discharging -10 – 55˚C
DIMENSIONS	W 610 x H 350 x D 170mm
WEIGHT	30KG

AceOn & GoodWe Working Together

AceOn and GoodWe have formed an exciting new partnership initially working together on the AceOn2.6 Energy Storage System. The AceOn2.6 and the range of GoodWe Inverters are a perfect pairing for new solar and storage installations or for adding energy storage to an existing Solar PV System.

GoodWe was established in 2010 – the same year as AceOn – and is a world-leading PV Inverter manufacturer with an accumulated delivery of more than 2 million inverters world-wide. GoodWe has identified AceOn and our expertise, knowledge, products and national positioning as a key partner in the UK Renewable Energy sector.

EM Series 3 -5kW I Single Phase LV Hybrid Inverter

The GoodWe EM series bi-directional energy storage inverter can be used for on-grid PV systems, with the ability to control the flow of energy intelligently. During the day, the PV array generates electricity which can be provided either to the loads, fed into the grid or charge the battery, depending on the economics and set-up. The stored electricity can be released when the loads require it during the night. Additionally, the power grid can also charge the storage devices via the inverter. An all-round intelligent system for maximum energy flexibility.

- SMART BATTERY MANAGEMENT FUNCTION
- EXPORT CONTROL (ZERO EXPORT)
- 8 MS UPS-LEVEL SWITCHING
- 50A CHARGE & DISCHARGE CAPACITY
- IP65 DUSTPROOF AND WATERPROOF
- FANLESS DESIGN, LONG LIFESPAN

GOODWE
YOUR SOLAR ENGINE

(GoodWe GW3648 – EM Inverter)

BATTERY INPUT DATA	
NOMINAL BATTERY VOLTAGE	48V
MAX CHARGING CURRENT	50A
MAX DISCHARGING CURRENT	50A
PV STRING INPUT DATA	
MAX DC INPUT POWER	4600W
MAX DC INPUT VOLTAGE	550V
MPPT RANGE	100 – 500V
START-UP VOLTAGE	125V
NOMINAL DC INPUT VOLTAGE	360V
MAX INPUT CURRENT	11 / 11A
NUMBER OF MPPTS	2
AC OUTPUT DATA (ON-GRID)	
NOMINAL POWER OUTPUT TO UTILITY GRID	3680W
MAX APPARENT POWER OUTPUT TO UTILITY GRID	3680VA
NOMINAL OUTPUT VOLTAGE	230V
MAX AC CURRENT OUTPUT TO UTILITY GRID	16A
AC OUTPUT DATA (BACK-UP)	
MAX OUTPUT APPARENT POWER	2300VA
PEAK OUTPUT APPARENT POWER	3500VA, 10 sec
NOMINAL OUTPUT VOLTAGE	230V (±2%)
MAX OUTPUT POWER	10A
EFFICIENCY	
MAX EFFICIENCY	97.6%
MAX BATTERY TO LOAD EFFICIENCY	94.5%
GENERAL DATA	
OPERATING TEMPERATURE	-25 - 60˚C
COOLING	Natural Convection
USER INTERFACE	LED & APP
WEIGHT	17KG
DIMENSIONS	W347 x H432 x D175 mm
IP GRADE	IP65
STANDBY SELF-CONSUMPTION	<13W

GOODWE BATTERY ENERGY STORAGE

To strengthen our supply chain of battery storage systems, we are also able to offer the GoodWe Lynx Home U Series Battery:

The GoodWe Lynx Home U Series is a low voltage lithium battery especially designed for residential applications with superior performance, safe battery technology (LFP) and optimized user experience. The in-built auto recognition function and the plug & play design allow for easy installation.

Model	LX U5.4-L
Usable Energy (kWh)	4.8
Nominal Voltage (V)	51.2
Nominal Charging / Discharging Current (A)	50
Installation Location	Wall-Mounted / Ground-Mounted
Enclosure Type	IP65

Up to 6 x 5.4kWh Batteries can be put in parallel to create a 32.4kWh Battery System

10 year warranty/
12.42MWh Minimum Through Output Energy

Storage NO.1 Hybrid
Wood Mackenzie
POWER & RENEWABLES

2019

World's No.1 Hybrid Storage Inverter Supplier

BloombergNEF

2021

The most financially stable inverter company

EUPD RESEARCH TOP BRAND PV 2021 20 19 18 17

2017-2021

EuPD Top Brand for 5 Consecutive Years

ACEON'S OTHER HIGH QUALITY RENEWABLES PRODUCTS

AceOn are UK Renewable Energy & Battery Specialists. Batteries are the beating heart of AceOn but we also supply other renewables products, including our own Smart EV Charger:

SOLAR PV PANELS

- AceOn work in direct partnership with a Tier One Supplier
- High efficiency
- Enduring high performance
- Innovative all-weather technology
- 'The most thorough testing programme in the industry'
- 12 year product warranty, 25 year performance warranty

'ACEON REVITALISE' – SMART EV CHARGER (Coming soon)

- 'The Smart EV Battery Charger from the UK Battery specialists'
- Available in Socketed and Tethered Versions
- 32A (7.4kW) single phase Mode 3 Smart EV Charger
- Easy-fit, Wi-Fi-enabled
- Built-in PEN Fault, surge and leakage protection
- Supplied with RFID fob to control and authorise charging
- Available in a range of colours

MADE IN BRITAIN

AceOn revitalise

'The Smart EV battery Charger from the UK Battery Specialists'

ACEON DELIVERING ENERGY STORAGE IN SOCIAL HOUSING – 'HEADLINES'

- ✓ AceOn has so far delivered over 1.5MWh of residential battery storage for local councils and housing associations in England and Wales.
- ✓ AceOn been a supplier of high quality batteries for homes funded or part-funded by national Governments:

  - **Welsh Government 'Housing and Regeneration Optimised Retrofit Programme' 2020-21;**
  - **UK Government's 'Getting Building Fund'.**

- ✓ AceOn were a partner in a project that has been nominated for a National Award in 2022 – 'Climate Change Retrofit Project of the Year' at the Inside Housing Development Awards.
- ✓ AceOn's work has been featured on BBC Midlands.

INTRODUCING OUR INCOME-GENERATING 'RENEWERGY TARIFF' MODEL

Renewergy
THE HOME RENEWABLE ENERGY GENERATION PARTNERSHIP

AceOn Energy & Rebel Energy have teamed up to deliver a ground-breaking wrap-around model that delivers for both housing providers and landlords. Solar Energy Generation plus Battery Storage plus 'Renewergy Tariff':

- ✓ **Reduces a Tenant's Bill now and into the future – helping to tackle fuel poverty, helping to protect and insulate from the full extent of future rises in energy prices and enabling a household to more easily pay their rent and other essential living costs.**
- ✓ **Provides a revenue income stream for Social Housing Providers – assisting the investment in renewable energy and other housing measures and turning Capital into Revenue to fund other services.**
- ✓ **Helps to tackle Climate Change – helping to decarbonise a Social Housing Provider's housing stock and reduce the carbon footprint of each home.**
- ✓ **Better Supports the local community – retaining more of the local £ within the local economy.**

WIN-WIN-WIN-WIN: ENVIRONMENTAL – SOCIAL – ECONOMIC - COMMUNITY

INTRODUCING REBEL ENERGY

AceOn Energy works in an exclusive national partnership with Rebel Energy, an OFGEM-Regulated Energy Supply Company.

Rebel Energy is the ONLY clean energy company with a social mission, as well as an environmental one, looking to tackle fuel poverty as a societal injustice.

Rebel Energy ensure that all billing of the solar energy (the 'RENEWERGY TARIFF') is completely within a legal, OFGEM-regulated framework for piece of mind.

We don't ask tenants to sign up on a long-term basis to any energy supplier – they retain their consumer rights to choose their external energy supplier.

But if a Tenant choose Rebel Energy as their external supplier, they offer:

- 100% Green Electricity (dual fuel if required)
- Fair Pricing
- Customer care
- 'Rebel Restoration' supports projects that remove carbon from the atmosphere, restore natural ecosystems and empower local communities.

Rebel energy

Rebel Energy is the next generation energy retailer supplying 100% clean, affordable energy to domestic households in the UK

Dan Bates
Rebel Energy CEO

There's no good reason why fuel poverty should exist. And energy suppliers have a big role to play in ending this injustice.

HERE'S WHAT WE'RE DOING ABOUT IT

- ✓ Pricing strategies that don't target the poor
- ✓ Identifying benefits and grants for customers
- ✓ Helping customers improve their credit scores

OUR OPTIONAL ‘WRAP-AROUND’ SOLAR & STORAGE ‘RENEWERGY TARIFF’ SOLUTION

OVERVIEW OF OUR SOLAR & STORAGE INCOME GENERATING MODEL FOR SOCIAL HOUSING PROVIDERS :

Social Housing Provider

1

Solar and battery systems installed in house

+ Industry leading residential energy storage systems used

+ Typically funded by Social Housing Provider

✓ AceOn can offer third-party finance direct to fund purchase of hardware & installation. Bespoke modelling available to suit each Social Housing Provider’s needs

Social Housing Provider & Rebel Energy

2

Social Housing Provider commissions Rebel Energy to deliver ‘behind the Meter’ Billing service to tenants

+ A discounted ‘Renewergy Tariff’ is charged for the electricity used that has been generated and stored via AceOn’s Solar PV/battery System installed.

+ The discounted Tariff price is agreed upfront and reviewed annually

✓ The Tenant is <u>not</u> required to switch to Rebel Energy to be their main supplier

Tenant

3

RENEWERGY in operation on your Social Housing stock

+ Amount of electricity used by the tenant is measured by internal meter and reading is sent to Rebel Energy.

✓ AceOn manages the life of the installation

✓ AceOn maintains the hardware

Energy bills

4

Rebel Energy sends a Bill to the tenant for electricity consumed under RENEWERGY tariff

+ If Rebel Energy is a secondary supplier only, the Tenant pays their energy supplier for electricity from the grid as normal

Grid

6

Surplus energy aggregated and exported to grid

✓ Rebel Energy pays the Social Housing Provider for surplus energy exported

Social Housing Provider

7

Rebel Energy pays the Social Housing Provider a percentage of its behind the meter billing charges

- **NO amendment needed to Tenancy Agreements**
- **NO requirement for a Tenant to change their current external energy supplier**

UNDERSTANDING ELECTRICITY COSTS FOR A HOUSEHOLD - NOW

- OFGEM Typical Domestic Consumption Values 2021 defined as for modelling:
  - 'MEDIUM' Household - 2,900kWh
  - -'HIGH' Household - 4,300kWh

- Tariff Options:
  - For those not on a Fixed Tariff, 'default' will be Energy company's Standard Variable Rate – OFGEM 'Price Cap'.
  - Any Fixed tariff will be higher than the level of the current OFGEM Price Cap.

Illustrative Electricity Bill – without Solar PV and Energy storage:

Assuming, **say, 3,500 kWh (mid-point) electric consumed, f**or the Standard Variable Rate (OFGEM Price Cap) using 3,500kWh electricity:

- 34.0p/kWh unit tariff price - £1,190
- 46.4p/day Standing Charge - £169.36

Estimated Total Annual Bill in Year 1 (3,500kWh) = £1,359.36 (inc. VAT)

Less Government one-off payment this Winter of £400 = £959.36 (inc. VAT)

ACEON STANDARD SOLAR ENERGY GENERATION & STORAGE SYSTEM

For modelling and illustrative purposes, we use a standard energy storage configuration as follows:

- **3.2kWp solar PV panels (c. 8 panels)**
- **3.68kW Hybrid Inverter**
- **5.2kWh AceOn battery Storage**

Our modelling shows that on average, for a house that consumes 3,500kWh of electricity in a year on average each year, there will be:

- **c.2,147kWh self-consumption of the solar energy generated/stored**
- **c.816kWh pa would be exported to the Grid.**
- **c.1353kWh of electricity needing to be imported from the Grid**

ACEON & REBEL ENERGY'S 'RENEWERGY' BILL - NOW

For modelling and illustrative purposes, we have set the 'Renewergy' Tariff that a Tenant would have paid at 50% of OFGEM's proposed October 2022 Energy Price Cap rate (before Government intervention):

- **25.8p per kWh**

NB. Social Housing Provider chooses the level of discount for the Renewergy® Tariff. Tariff reviewed annually.

For a household that uses 3,500kWh of electricity pa that has had AceOn's Solar Energy generation and Storage system installed, their total electricity costs from the 'RENEWERGY' bill and their external supplier's bill would be:

2,147kWh of Solar energy generated/stored/used – **discounted* RENEWERGY® TARIFF (@25.8p/kWh)**	= £553.93
1353kWh of electricity imported from the Grid (@34.0p/kWh)	= £460.02
Standing Charge @46.4p/day	= £169.36
TOTAL BILL (inc. VAT) IN YEAR 1 USING ACEON'S SOLAR ENERGY GENERATION & STORAGE SYSTEM	**= £1,183.31**
Less Government one-off payment this Winter of £400	**= £783.31**
TOTAL ESTIMATED SAVING ON TOTAL ELECTRICITY COSTS FOR TENANT IN YEAR 1	**= £176.05 SAVING (£959.36)**

ACEON & REBEL ENERGY'S 'RENEWERGY' BILL – APRIL 2023 SCENARIO

For modelling and illustrative purposes, we have set the 'Renewergy' Tariff that a Tenant would have paid at 50% of OFGEM's proposed October 2022 Energy Price Cap rate (before Government intervention):

- **25.8p per kWh**

Let's project that the current EPG Tariff (c.34p/kWh) increases to 42p/kWh, but Standing Charge remains same.

For a household that uses 3,500kWh of electricity pa that has had AceOn's Solar Energy generation and Storage system installed, their total electricity costs from the 'RENEWERGY' bill and their external supplier's bill would be:

2,147kWh of Solar energy generated/stored/used – **discounted* RENEWERGY® TARIFF (@25.8p/kWh)**	= £553.93
1353kWh of electricity imported from the Grid (@42.0p/kWh)	= £568.26
Standing Charge @46.4p/day	= £169.36
TOTAL BILL (inc. VAT) USING ACEON'S SOLAR ENERGY GENERATION & STORAGE SYSTEM	**= £1,291.55**
TOTAL BILL (inc. VAT) WITHOUT SOLAR ENERGY GENERATION & STORAGE SYSTEM & RENEWERGY	**= £1,639.36**
TOTAL ESTIMATED SAVING ON TOTAL ELECTRICITY COSTS FOR TENANT IN YEAR 1	**= £347.81**

PROJECTED INCOME & BENEFITS FOR SOCIAL HOUSING PROVIDER

For the Social Housing Provider, this system delivers projected net income in Year 1 as follows:

Net* income from Renewergy tariff (2147kWh @20.6p/kWh)	**£407.28**
Net income from sale of Exported Solar Energy (816kWh @7.5p/kWh)	**£61.20**
TOTAL NET INCOME – YEAR 1 (less £35pa for Mobile data)	**£433.48**

Estimated Cumulative ~ Income to Social Housing Provider:

By Year 5	**- £2,619**
By Year 10	**- £5,513**
By Year 15	**- £8,708**
By Year 20	**- £12,233**
By Year 25	**- £16,126**

AND CUTTING CO2 EMISSIONS ALSO:

For each house installed with a 3kWp Solar energy storage and generation system, a **reduction of c.629.1kgCO2e of emissions would be achieved per year. Over 30 years, based on current figures, that would equate to 18.873 Tonnes (equivalent to 139 barrels of oil!)**

(Based on Government figures of 0.233kgCO2e per kWh of electricity. As the electricity network decarbonises further in the future, this figure will reduce.)

…And also delivers a saving for each Tenant!

(* Net income takes account of the deduction of 5.3p/kWh for billing and administration services and £35pa SIM cost for data transfer.
~ Figures show Gross Renewergy Tariff and export income increasing by 2% pa over 25 years as an illustration. Rates are reviewed and agreed on an annual basis)

ESTIMATING FUTURE REVENUE INCOME & COSTS FOR THE SOCIAL HOUSING PROVIDER OVER 25 YEARS

Estimated Life-time costs for the supply of Solar PV, Smart Metering, Inverter and battery system are:

	Year 1 Solar PV, Hybrid Inverter, Meter, 5.2kWh battery storage	Year 10 Replacement Inverter	Year 15 Replacement Battery	Year 20 Replacement Inverter	Est. Total (over 25 years)
AceOn Solar PV & Storage Per Home	£4,900	£1,000	£2,000	£1,000	£8,900

(NB. Excludes installation costs which are subject to survey etc)

ASSESSMENT OF ESTIMATED BENEFITS ACHIEVED BY SOCIAL HOUSING PROVIDER PER HOME:

Timeframe	Indicative Estimated (Cumulative) Income for Housing Provider*	Indicative Estimated (Cumulative) Saving for Tenant	Indicative Estimated TOTAL (Cumulative) Financial Benefit Achieved by Investment	Estimated (Cumulative) Investment made by Housing provider (excludes installation costs)
Year 10	£5513	£3,920	£9,433	£4,900
Year 15	£8708	£6,190	£14,898	£5,900
Year 20	£12,233	£8,698	£20,931	£7,900
Year 25	£16,126	£11,465	£27,591	£8,900

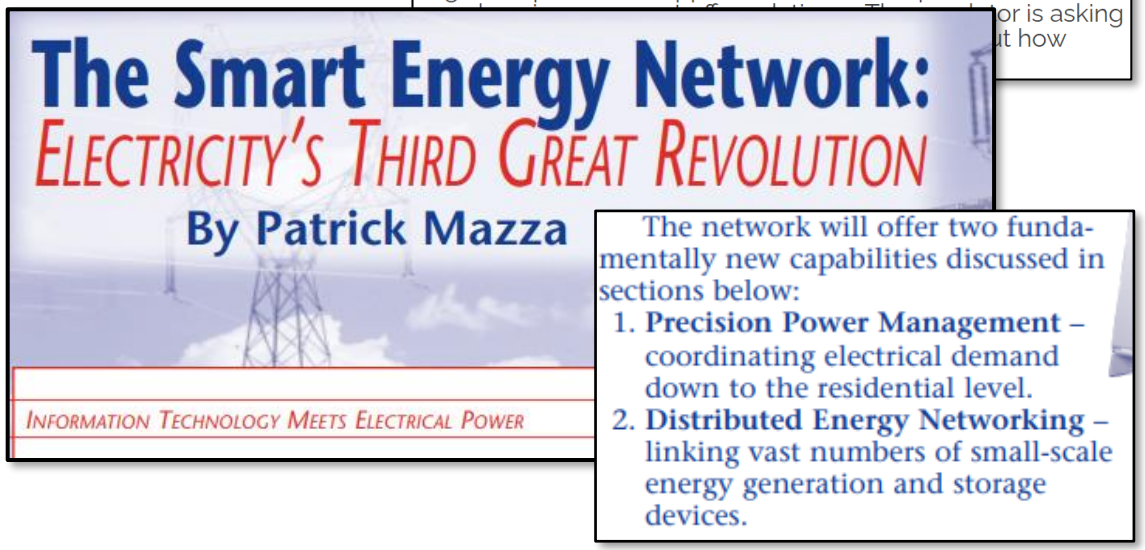
NB *It is very difficult to predict what support will be and the unit Tariff rate will be after the Government's 6-month Rate 'freeze' ends. Our assumption is that this will be a base for future increases. Figures above are based on a projected 25% increase in April 2023 and 2% increase pa. (Also dependent on the rate of the RENEWERGY® Tariff set by the SHP).

THE WIDER POTENTIAL BENEFITS OF BATTERIES – NOW & IN THE FUTURE

"Electrical power is entering its greatest revolution in a century, bringing profound changes in its production, delivery and use".

Battery storage is key to unlocking so many additional benefits and opportunities:

- ✓ **Back up source of power in a Grid outage**
- ✓ **Customers to be rewarded for reducing energy consumption/ changing patterns of usage**
- ✓ **Ability to benefit from cheaper off-peak, flexible Tariffs (Time of Use Tariffs)**
- ✓ **Opportunities for Grid Services/Trading to support Grid balancing and Frequency (Half-hourly billing as part of Virtual asset networks)**
- ✓ **Changes to OFGEM Balancing & Settlement to enable Renewable Energy sharing and potential for Peer-to-Peer support so that those households without Solar PV can still benefit.**



DECARBONISING NEW-BUILD HOMES CONSTRUCTION SITES & OPERATIONS

AceOn Li-on ESS 80
Mobile Energy Storage System

MADE IN BRITAIN®

AceOn Li-on ESS
Mobile Energy Storage Systems
Compact • Flexible • Reliable • Agile

- ✓ Decarbonised Off-Grid Mobile Power Solution..
- ✓ Replace Diesel/Petrol Generators on Development sites to power and charge machinery & tools etc.
- ✓ Resilience – Emergency Power.
- ✓ Portable Power source for Environmental & Highways teams and contractors.

APPLICATIONS

- Mobile power source
- Diesel generator alternative /replacement
- Operation in hybrid power applications
- Silent power generation
- Back-up power services
- Off grid power solutions

FEATURES

- Flexible re-charging via a single point charge socket
- Full remote monitoring including location tracking
- Touch screen monitoring and control functions
- Wi-Fi and Cellular network connectivity
- Interface to external software platforms as required
- Low maintenance
- Plug and play, easy to use

SPECIFICATIONS

TECHNICAL DATA			
Nominal Storage Capacity		80.6kWh	
Re-charge Power		≤30kW	
Nominal AC Voltage		400V	
System re-charging		Type 2 EV-charging socket (≤22kW)	
		3-Phase (16A, 32A, 63A) sockets (≤30kW)	
Connection panel: Switchable			
Socket Type		Voltage	Max AC Current
6 x UK	Single Phase	230V	13A
6 x EUR		230V	16A
3 x CEE		230V	16A
1 x CEE		110V	16A
1 x CEE	3 Phase	400V	16A
Depth of Discharge (DoD)		90%	
Operation Life		10+ Years or 4500 cycles	
Operation Temperature (Ambient)		0 to 40°C	
Storage Temperature		-20°C to 50°C	
Dimensions		2360mm (W) * 1095mm (D) * 1170mm (H)	
Weight (Approx)		1250 kg	
Power measurement on individual lines			
DNV compliant upper lifting points			
Standard fork-lift access compatible			
Stainless Steel (frame) and Aluminium (shell) construction			
Trailer mounted option available			

Supports Climate Change Action Plans & Targets

Ditch Fossil Fuels

TRAINING

AceOn can arrange a programme of tailored installation training opportunities to upskill your workforce or we can facilitate local training opportunities for young people working with local Colleges, working in partnership with UK MCS, to help create the future ‘green workforce’ through Accredited Courses:

- Energy Storage system
- Solar PV
- In-Roof Solar PV
- Electric Vehicle Charging Equipment
- Wiring Regulations
- Air Source Heat Pumps

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Powering ahead with new battery storage systems courses

Published 18th February, 2022 by John Hatcher

Telford College is opening a new centre for battery energy storage training, helping to upskill local electricians, electrical technicians and engineers in this important element of renewable power systems.

The accredited LCL Awards course, which begins on March 28, is being run in conjunction with training company GTEC, supported by Telford-based specialist battery supplier and manufacturer, AceOn Group.

ACEON DELIVERS

- ✓ **Recognised nationally as one of the leading Energy Storage companies in the UK.**
- ✓ **A unique blend of private and public sector experience in our Management Team.**
- ✓ **High quality and value-for-money Energy Storage Systems, backed up by 30 years' experience in the battery Industry.**
- ✓ **A strong commitment to Social Value – establishing FE Colleges as Renewables Training Centres, supporting DLOs to upskill.**
- ✓ **AceOn developed the ground-breaking 'Renewergy Model' to meet key objectives for Housing providers and Landlords –**
  - ➢ **Reducing a Tenant's Bill now and into the future**
  - ➢ **Providing a revenue income stream for Social Housing Providers**
  - ➢ **Helping to tackle Climate Change**
  - ➢ **Better supporting the local community**

THANK YOU

"Offering solutions today for tomorrow's world"

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